

requires a design for a corn market, subscription room, lecture room, and sundry other conveniences, appropriating the present buildings for the purpose, which, by the bye, I find cover a space of 51 feet frontage, by a depth of 168 feet.

To effect this, your readers are aware that it will be essential to take a plan of the premises as they at present exist.

The time required to take this plan, to lay it down on paper from the rough dimensions and sketch, and make a design for the purposes required, would, at least, occupy any one, with the assistance of a clerk, four days, besides the expenses of travelling by railway there and back, twenty-four miles. Thus I calculate that the "fortunate competitor" (rather a negative term, by the bye, under the circumstances) would be a decided loser.

But the chances against this enviable position are more dreadful than at once presents itself, for Mr. George asserts that he has already received 150 designs, and I have no reason, from the authority that I quote, to doubt the truth of his having so stated; except that there must be 149 weaker men in the profession than falls to its average lot, and from the circumstance of his having in a second advertisement postponed the period of receiving the designs for fifteen days, trusted to that weakness, in expecting a few more. When I incurred the first expense of going to Romford, I inferred, although not so stated in the advertisement, that the successful competitor would be chosen as architect, to carry out the work; but there I reckoned without my "advertiser," for I find that Mr. George makes no secret in stating that he has already a design of his own, which he intends to adopt, modified and doubtless improved by the kind suggestions of these numerous professional friends. This much information did I glean at the expense of some 10s. ("5 per cent. on the probable amount, as we say"); but who formed the committee nobody knew. In vain I asked, as the advertisement suggested, "for full particulars" of Mr. Harvey George, and, as my own instinct prompted, of the builders in the town. The only certain knowledge I could acquire was, that Mr. Harvey George had taken the premises on lease, with the option of purchasing; that he projected the scheme, and advertised it; that he intended himself to build it; and that there appeared to be but one opinion, which was, that he would be his own architect, and, like one who would be his own lawyer, and, like one who would be his own client.

I think that the profession deserve this caution, and to vouch for its authenticity I enclose you my name.

AN ARCHITECT.

#### MEASUREMENT OF BRICKWORK IN BARREL DRAINS.

SIR,—Will you be kind enough to inform me through the medium of your journal, how I am accurately to measure the contents of a 12-inch barrel drain,—a friend disputing my method.

In my opinion the outer circumference should be measured thus:—12 inches diameter of drain, half brick on each side = 8 inches; total 20 inches, by three times for circumference, gives 60 inches, or 5 feet of 1 inch brickwork, which say in 100 feet, will give 166 feet 8 inches reduced brickwork.

The other method is, to measure the diameter and one rim, making 16 inches instead of 20, which in 100 feet will give only 133 feet 4 inches, a material difference.—Your kind information will oblige

AN ENQUIRER.

[Our correspondent is wrong; the exterior and interior circumference should be added together, and the half of it taken as the mean. This multiplied by the length and divided by 3 (if the sides are half brick thick), will give the quantity of reduced brickwork. The mean circumference is obtained for practical purposes, by adding the internal diameter to the thickness of one rim, and multiplying the result by 3. Thus 12 inches, the diameter of the drain in question,  $\times \frac{1}{2}$  inches (the rim) = 16½ inches, which being multiplied by 3, gives 4 feet 1 inch the circumference. This being multiplied by the length, 100 feet, we have 433 feet 4 inches or 141 feet 5 inches reduced. In precise terms, the diameter of a circle is to the circumference as 7 is to 22.—ED.]

#### MATHEMATICS AS APPLIED TO CARPENTRY.

SIR,—I very much wish an answer to the following:—By what means can I learn to apply Log. con. cosec., &c., &c., to constructive carpentry, in calculating the several weights required and thrusts produced, to calculate weakness, &c.? If in a work on the same, I shall be glad of the name of it.—I am, Sir, &c.,

A READER.

#### SHOP-FRONTS UNDER NEW BUILDINGS ACT.

SIR,—Your "Subscriber" is not bound to carry up an "unsightly mass of brickwork" of the same projection as the cornice of his shop front, or an inch beyond it. The schedule requires merely a pier or corbel of "incombustible material." He can, therefore, form in the line of the party-wall a cement pilaster, 9 inches wide, with face and cap-mouldings, and cornice, similar to those of the wooden shop-front and story-posts, but breaking one inch before them. The pilaster and cornice would be both "pier" and "corbel"; and, especially in a continued range of shops, would be far from "unsightly."

I am, Sir, &c.,

M. B. A.

#### Miscellaneous.

BRICKS.—A correspondent of the *Mining Journal* remarks, that "should the clay of which bricks are made be contaminated with fragments, however minute, of chalk or limestone, the consequences may be very serious. On transference to the furnace, the carbonate is converted into quicklime, and when the bricks are moistened, they necessarily burst, and crumble to pieces." In the case of bricks used in tunnels, this is of paramount moment, and will explain the destruction of the tunnel of Comptiel, between Belgium and Rhenish Prussia. The fault lay with the brickmaker, not the engineer. I have seen the destruction of an earthenware vessel from this cause, as soon as water was poured into it."

THE DORSET COUNTY HOSPITAL is now drawing towards completion, and, when finished, will be capable of accommodating 300 in-patients. It stands in an open part of the city of Dorchester, near the West-walks, upon ground presented by Robert Williams, Esq., of Bridehead. The north wing of the building has been opened for the reception of patients for some time. This institution is supported by voluntary contribution. When we see the number of patients within its walls, it seems surprising that Dorset should so long have remained deficient of a county hospital. Mr. Benjamin Ferrey is the architect employed.

FALL OF PART OF THE IRON ROOF OF A WAREHOUSE.—Considerable alarm was excited in Salford a short time ago, by the fall of the greatest portion of the roof of one of the buildings of the Manchester Bonding Warehousing Company, Chapel-street, which for many years was used as the cotton warehouse in connection with the mill of Messrs. Philips, Lee, and Co. The gable end of this building fronts Chapel-street. The building is about 120 feet in length and 40 feet wide. The roof was an old cast-iron one, much decayed, and was supported by two ranges of iron columns (the building being fire-proof) dividing the building longitudinally into three bays. These columns were very slight, and from iron cups let into the top of these pillars very light principals of cast-iron were carried at a shallow spring to support the roof, or rather roofs, for it was in three divisions. Several workmen and others were upon the roofing, which was undergoing repairs, when, about twenty minutes before eleven o'clock, the whole of the division next the yard of the premises fell at once with a loud crash, and this, dragging the tie-rods down, dislodged the pillars on one side of the centre bay; about the third of the roof of which next fell, followed by a rather larger proportion of the roof of the other outer bay, so that in all about two-thirds of the roofing fell. Amongst the individuals on the roof was a clerk of Mr. A. Mills, architect, who escaped without injury. Upon further inspection, it has been found that nearly all the cast-iron cups in one range of pillars had been cracked or torn, apparently for a long time, by some severe shock or strain, and one of the principals was also broken.—*Manchester Guardian*.

RAILWAY IN SPAIN.—A railway from Barcelona to Mataro has been decided on, the first Spanish line, and many of the shares are subscribed for. We cordially wish it success, believing that an improvement in the means of communication will greatly aid in consolidating this unfortunate country.

#### ST. MARY-LE-BONE BANK FOR SAVINGS.

The fifteenth annual general meeting of this institution was held on Thursday, the 27th ult., at the office, in Welbeck-street, Cavendish-square. It appeared from the several reports read to the meeting, that the progress of this bank continues to be of a very favourable description, no less than 2,674 new deposits having been made in the last year. 15,124 deposit accounts remained open on the 20th November last, of which 9,503 held balances averaging less than 47.5s. 10d. each. Upwards of 350,000*l.* was then invested with the commissioners for the reduction of the National Debt; this amount has since risen to 353,000*l.* 4*s.* 7d., and is rapidly on the advance. The continued evidence thus afforded of the strong and growing disposition of the working classes to provide against the casualties of life, will prove a source of gratification to all reflecting minds.

#### THE FOUNTAINS IN TRAFALGAR-SQUARE.

—The labour of the mountain has produced a mouse. After the long-heard note of preparation, we looked for something, more than ordinarily beautiful and original, and are therefore annoyed to find that the new fountains are nothing more nor less in design than might have been purchased, dolphins and all, ready-made, at any of the artificial stone shops in the Paddington-road. The beauty of the material, polished red granite, is the saving clause.

FIRMS.—The late fire at Captain Duncombe's in Grosvenor-square was another result of the incautious fixing of stoves. It was caused by the overheating of a hot-air stove, which communicated with the flooring of the hall.

#### NOTICES OF CONTRACTS.

We are compelled by the interference of the Stamp Office to omit the names of the parties to whom tenders, &c., are to be addressed. For the convenience of our readers, however, they are entered in a book, and may be seen on application at the office of "The Builder," 2, York-street, Covent-garden.

For completing the Works connected with the enclosing and annexing certain Land lately purchased for the improvement of Newport Bridge, in the Isle of Wight. March 8.

For repairing the footway pavements, and providing and laying new curb and other stone; for repairing the carriage-way, pavements, and providing and laying new granite and other stone, during one year from Lady-day next, for the united parishes of St. Andrew, Holborn, and St. George-the-Martyr, Middlesex. March 8.

For a supply of from 200 to 300 tons of Rails, and from 100 to 200 tons of Chairs, for the Eastern Counties Railway. March 10.

For building a Sewer in Addle-hill, Doctors-commons. March 11.

For paving and repairing the Carriage-ways and Foot-ways within the parish of St. Paul, Covent-garden. March 11.

For supplying and laying down about 400 yards of cast-iron Pipe, of 10 inches diameter, for the Commissioners of the Southampton Water-works. March 13.

For building a Sewer in the City-road, St. Luke's, near Charles-street, in length about 401 feet; and lowering an existing Sewer, in length about 130 feet. March 14.

For the repairs and restoration of the Tower and Nave of St. Mary's Church, Nottingham. March 17.

For supplying her Majesty's several Dock-yards with Riga Hand Masts and Fir Timber, Dantzic Deck Deals and Fir Timber, and Norway Spars. March 28.

For new-paving such parts of the parish of St. Mary, Islington, and repairing the paved Foot-ways, as may from time to time be required, during one whole year from Lady-day next. March 19.

For the supply of 11,000 feet of nine-inch cast-iron Pipes for a new line of Aqueduct to be laid in the Island of Malta. March 31.

For the supply of 11,000 feet of 9-inch cast-iron Pipes for a new line of Aqueduct in the Island of Malta. April 30.

For new-paving parts of the parish of St. Mary, Islington, Middlesex; and for repairing and keeping in repair the paved Footways belonging thereto, for one year from Lady-day next. Also for supplying unbroken Guernsey Granite, Core, Ballast, Gravel, and clean Flints.